

3/20/03

**EXPLANATION OF SIGNIFICANT DIFFERENCES
COMMENCEMENT BAY NEARSHORE/TIDEFLATS SUPERFUND SITE
MIDDLE WATERWAY**

I. INTRODUCTION

A. Purpose

EPA's September 30, 1989 Record of Decision (ROD) for the Commencement Bay Nearshore /Tideflats (CB/NT) Superfund site selected a remedy involving a combination of five key elements: site use restrictions (now commonly referred to as institutional controls), source control, natural recovery, sediment remedial action (i.e., confinement and habitat restoration), and monitoring, to address contaminated sediments in the waterways of the CB/NT site. In July 1997, EPA issued an Explanation of Significant Differences (ESD) which modified the PCB cleanup level. In August 2000, EPA issued an ESD which described the cleanup plans for three of the waterways in Commencement Bay—Thea Foss, Wheeler-Osgood and Hylebos— and identified the disposal sites selected to contain dredged contaminated sediments from all the waterways. In February, 2002, EPA issued an ESD to describe the specific cleanup plans for the Middle Waterway problem area and identify the manner in which the remedial methods outlined in the ROD would be applied in Middle Waterway. The purpose of this ESD is to identify an enhanced remedy that has been selected for Area C in Middle Waterway.

B. Lead and Support Agencies

U.S. Environmental Protection Agency (EPA) – Lead Agency for Sediment Remediation

Washington State Department of Ecology (Ecology) - Lead Agency for Source Control; Support Agency for Sediment Remediation

Puyallup Tribe of Indians - Support Agency for Sediment Remediation

C. Statutory Authority

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), Section 117(c) and National Oil and Hazardous Substances Pollution Contingency Plan (NCP), Section 300.435(c)(2)(i).



II. BACKGROUND

A. Site Name, Location and History

The CB/NT Superfund site is located in Tacoma, Washington at the southern end of the main basin of Puget Sound. The site includes 10-12 square miles of shallow water, shoreline, and adjacent land, most of which is highly developed and industrialized. The upland boundaries of the site are defined according to the contours of localized drainage basins that flow into the marine waters. The marine boundary of the site is limited to the shoreline, intertidal areas, bottom sediments, and water of depths less than 60 feet below mean lower low water level (MLLW). The nearshore portion of the site is defined as the area along the Ruston shoreline from the Mouth of Thea Foss Waterway to Pt. Defiance. The tideflats portion of the site includes the Hylebos, Blair, Sitcum, Milwaukee, St. Paul, Middle, Wheeler-Osgood, and Thea Foss waterways; the Puyallup River upstream to the Interstate-5 bridge; and the adjacent land areas. Middle Waterway is located between Thea Foss Waterway and the Puyallup River.

EPA placed the CB/NT site on the National Priorities List (NPL) of sites requiring investigation and cleanup under EPA's Superfund Program on September 8, 1983. A remedial investigation/feasibility study (RI/FS) was completed by Ecology in 1988. EPA made the final RI/FS and Proposed Plan available for public comment in February 1989. The RI/FS evaluated contaminants detected in sediments at the CB/NT Superfund site to identify problem chemicals that pose a risk to human health and the environment. The RI/FS concluded that sediments in the nearshore/tideflats area were contaminated with a large number of hazardous substances at concentrations greatly exceeding those found in Puget Sound reference areas and which exceed sediment quality objectives (SQOs) defined for the site. Contaminated sediments in Middle Waterway have been found to contain levels of mercury, copper and PAHs that are considered harmful to humans and wildlife.

III. DESCRIPTION OF AND BASIS FOR THE SIGNIFICANT DIFFERENCES

A. Introduction

The CB/NT ROD sets forth a general cleanup approach for the waterways that comprise the CB/NT site and identifies, based on RI/FS sampling data, problem areas requiring response action. The August 2000 ESD identified disposal sites (two nearshore confined disposal sites and upland disposal) which would be most appropriate to safely contain dredged sediments. The February 2002 ESD for Middle Waterway better defined the area and volume of sediment exceeding the SQOs, and identified specific areas to be dredged or capped, as well as areas where natural recovery or enhanced natural recovery would be appropriate. The 2002 ESD also identified the disposal site for the contaminated sediments and refined the cost of the remedial action. None of these significant differences fundamentally altered the remedy selected in the ROD.

The February 2002 ESD for the Middle Waterway problem area identified cleanup actions to address contamination throughout the entire waterway. The selected remedies for Areas A and B included a combination of dredging and backfilling with clean material, thick capping, surficial capping with habitat mix, enhanced natural recovery, natural recovery and no action. In Area C, located at the head of the waterway (see Figure 1), the selected remedy consisted of leaving contaminated subsurface sediments undisturbed in Sediment Management Unit (SMU) 51a with enhanced natural recovery to address the surface sediment contamination in both SMUs 51a and 51b (Area C), and long-term monitoring. No action is required for SMU 52a and 52b.

During the public comment period for the draft ESD for Middle Waterway, EPA received numerous comments that did not support leaving the subsurface contamination in place in SMU 51a. Comments received from both the Washington Department of Ecology (Ecology) and the Washington Department of Natural Resources (DNR), indicated the state was not in agreement with the proposed remedy for SMU 51a. The State disagreed with EPA's analysis of the data and asked for more cleanup than EPA deemed necessary to protect human health and the environment.

EPA took these concerns into consideration before issuing the final ESD and responded to comments in a Responsiveness Summary, however, EPA's preferred remedy for SMU 51a was not revised in the final ESD. After the final ESD was issued, EPA and the state continued to have discussions about the EPA-selected remedy for SMU 51a. Ecology, in conjunction with DNR (one of the Potentially Responsible Parties [PRPs] in Middle Waterway), has now proposed to do additional removal work in SMU 51a that would be funded by the state. In accordance with Section 40 CFR 300.515(f) of the National Contingency Plan (NCP), while EPA finds that the proposed enhancement of the selected remedy is not necessary to the EPA-selected remedial action, EPA also finds that the enhanced action does not conflict nor is it inconsistent with the EPA-selected remedy. Therefore, EPA has agreed to incorporate the additional cleanup as an enhancement to the selected remedy as allowed by the NCP.

This enhancement to the selected remedy is not based on new information or a change in EPA's original interpretation of the data. It reflects the desire on the part of the state and other stakeholders for a more permanent remedy and the state's willingness to fund the entire additional cost associated with the removal of contaminated subsurface sediments in SMU 51a. The Administrative Record documenting the enhanced remedy for SMU 51a will consist of this ESD, and also incorporates by reference the Administrative Record for the February 2002 ESD.

B. Description of Significant Differences

The February 2002 ESD specified enhanced natural recovery and long-term monitoring for Area C of the Middle Waterway. The enhanced remedy for Area C consists of excavation of contaminated sediments and backfilling within SMU 51a with upland disposal, rather than leaving the contaminated subsurface sediments in place. Upland disposal of excavated material will be at the Roosevelt Regional Landfill, consistent with the August 2000 ESD. This ESD

assumes that the volume of sediments excavated for disposal will not exceed 4000 cubic yards. If contamination is found at depth that exceeds this volume, it will remain in place, capped with clean material and subject to long-term monitoring. Enhanced natural recovery with long-term monitoring remains the selected remedy for SMU 51b. All work will be performed by DNR, in accordance to the Consent Decree and Statement of Work that has been negotiated for this site.

In the February 2002 ESD, EPA estimated the costs of enhanced natural recovery and long-term monitoring for Area C to be approximately \$400,000. The cost of the enhanced remedy will be \$1.6 million, approximately \$1.2 million more than the February 2002 ESD.

Changes in expected outcomes include more time to implement the remedial action (approximately one year longer than the 2002 ESD-selected remedy) and the likely need for less monitoring of the subsurface sediments.

IV. PERFORMANCE CRITERIA FOR THE REMEDIAL ACTIONS

For all the waterways in Commencement Bay, the August 2000 ESD expands on and clarifies the general cleanup approach set forth in the CB/NT ROD; it added the Endangered Species Act (ESA) as an applicable, or relevant and appropriate, requirement (ARAR) for remedial actions under the ROD; it selects two in-water disposal sites and upland disposal as acceptable disposal options; and, it provides performance criteria to be applied to the design and implementation of the selected remedial actions and mitigation projects. Those performance criteria apply to all capping, dredging, confined disposal, natural recovery, and enhanced natural recovery activities, and address subsurface contamination and mitigation. The additional requirements and clarifications supplied in the August 2000 ESD are not repeated here but are applicable to the Middle Waterway. There are no new ARARS associated with the enhanced remedy in SMU 51a.

V. SUPPORT AGENCY COMMENTS

Both the Washington Department of Ecology and the Puyallup Tribe did not support the selected remedy for Area C in the February 2002 ESD. The enhanced remedy now reflects both the Agency's and the Tribe's preferred remedial action. Ecology is working closely with DNR to design and implement the enhanced remedy.

VI. AFFIRMATION OF THE STATUTORY DETERMINATION


Since the enhanced remedy goes beyond the 2002 ESD remedy, this selected remedy is protective of human health and the environment, complies with Federal, State and Tribal requirements that are applicable, or relevant and appropriate to this remedial action as identified in the ROD and subsequent ESDs, and is cost-effective. This remedy utilizes permanent solutions and alternative treatment technologies to the maximum extent practicable for this site. However, because treatment was not found to be practicable, this remedy does not satisfy the statutory preference for treatment as a principle element. Because the remedy for portions of

Middle Waterway will result in hazardous substances remaining onsite above health-based levels, a review will be conducted within five years after commencement of the remedial action to ensure that the remedy continues to provide adequate protection of human health and the environment.

VII. PUBLIC PARTICIPATION ACTIVITIES

This ESD will go out for public review at the same time that the Consent Decree for Middle Waterway is lodged with the court and undergoes public review and comment.

Signed:



Michael F. Gearheard, Director
Office of Environmental Cleanup

3/20/03

Date

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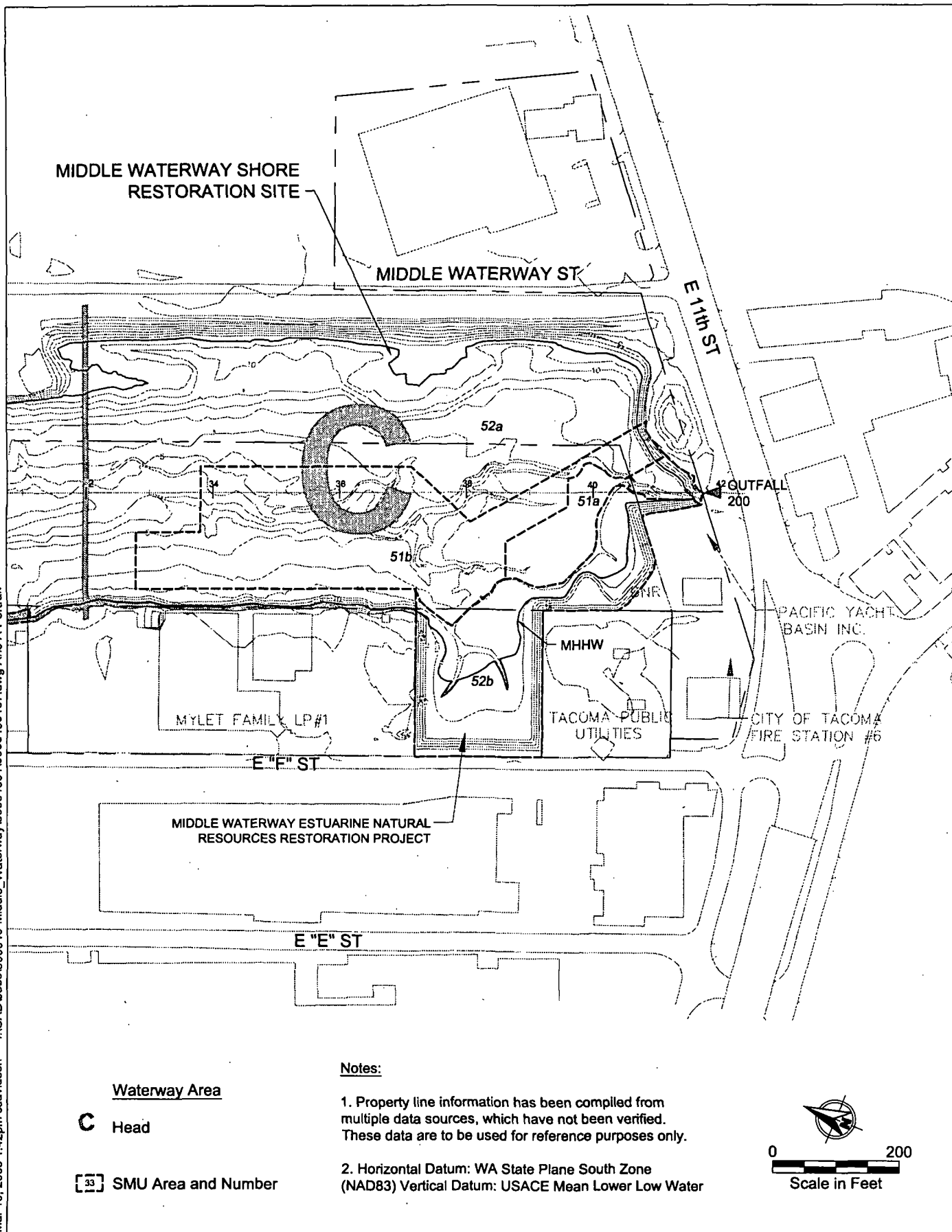



Figure 1
Middle Waterway Problem Area
Area C

MIDDLE WATERWAY
Explanation of Significant Differences
March, 2003

| CONCURRENCES | | | | | | |
|--------------|-----------|----------|--|--|--|--|
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Office of Regional Counsel
MIDDLE WATERWAY
Explanation of Significant Differences
March, 2003

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